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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,376	11/21/2001	Koichi Okada	Q66493	1313

7590 08/12/2005
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EXAMINER

LAM, ANDREW H

ART UNIT PAPER NUMBER

2624

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/989,376	Applicant(s) OKADA, KOICHI	
	Examiner Andrew H. Lam	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For example, claim 8 recites: "position detecting unit which detects an image size based on positions of said at least two sides along said predetermined transporting direction." The examiner is unclear as to how the position detecting unit is used to detect the image size if the image recording material does not have an image on it until it reaches the image forming unit where the image is recorded. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-4, 6-10, 12-16 and 18-19 rejected under 35 U.S.C. 102(b) as being anticipated by Kahoyashi et al (U.S. Patent 5,041,850) hereinafter Kahoyashi.

Regarding claim 1, Kahoyashi discloses an image recording apparatus (fig. 12, is a front view schematically illustrating a label printer) comprising: an image recording unit (fig. 12, printing head 4) which records an image on an image recording material (col. 6, lines 60-61, the printing head 4 is started so that printing information is transferred onto the label paper S); a transporting unit (fig. 12, roller mechanisms 86) which transports said image recording material whose shape has at a least one side in a predetermined transporting direction (col. 4, lines 31-33, a plurality of guide plates 87 are disposed to hold the continuous printing paper P between the roller mechanisms 86 and the like, see fig. 12); an image recording position detecting unit (fig. 7, paper width sensor 16) which detects a position of said at least one side along said predetermined transporting direction (col. 10, lines 12-15, the paper width sensor 16 is to detect the position of the printing paper P in the width direction of the paper, see fig. 7); an image recording position correcting unit (fig. 6, control function 66) which corrects said image recording position for said image recording material based on result of detection of said at least one side by said image recording position detecting unit (col. 10, lines 58-61, a data table of the angle of correction with respect to the positional deviation is stored in the control function portion 66); and an image forming unit (fig. 12, photosensitive drum 2) which forms a desired image on said image recording material at the corrected image recording position (col. 10, lines 1-6, the skew correction mechanism U3 is disposed in the traveling path N of the printing paper P to control (correct) continuously the position

in the width direction of the printing paper P to a normal position with respect to the peripheral surface of the photosensitive drum 2).

Regarding claim 2, Kahoyashi discloses an image recording apparatus according to claim 1, said image recording position detecting unit detecting an inclination with relative to said transporting direction (col. 10, lines 34-38, Q1 is the angle of inclination with respect to the transporting direction detected by the paper width sensor 16, see fig. 7) of said image recording material during transporting from a plurality of portions along said side obtained using said image recording position detecting unit and said image recording position correcting unit correcting a present position of said image recording material depending on said inclination (col. 10, lines 53-60, Q2 which is the correction angle can be calculated using the value of Q1 with respect to normal position to adjust the paper).

Regarding claim 3, Kahoyashi discloses an image recording apparatus according to claim 1, said position detecting unit having a laser length measuring unit (col. 10, line 15, paper width sensor 16 utilize an image sensor employing a lens array--examiner is interpreting lens array as being a laser length measuring unit since in a laser device an array of lens is used to amplify a white light source to make it a collimated light, see fig. 7).

Regarding claim 4, Kahoyashi discloses an image recording apparatus according to claim 1, said position detecting unit having a transmission-type detecting unit or a reflection-type optical detecting unit (col. 10, line 15, paper width sensor 16 utilize an image sensor employing a lens array, see fig. 7).

Regarding claim 6, Kahoyashi discloses an image recording apparatus according to claim 1, said image recording material being a rectangular (fig. 5, label paper S is shown being rectangular in shape) and/or flexible film.

Regarding claim 7, Kahoyashi discloses an image recording apparatus according to claim 1 being a thermal printer or a laser printer (col. 5, lines 1-5 A main charger 3 is provided for charging the photosensitive drum 2, a printing head 4 prints information such as figures and characters on the photosensitive drum 2 and a developer 5 attaches toner to the printing information on the photosensitive drum 2. All of these elements are successively disposed opposite to the surface of the photosensitive drum 2 before the transfer--it is known in the art that this is the process of a laser printer).

Regarding claim 8, Kahoyashi discloses an image recording apparatus (fig. 12, is a front view schematically illustrating a label printer) comprising: an image recording unit (fig. 12, printing head 4) which records an image on an image recording material (col. 6, lines 60-61, the printing head 4 is started so that printing information is transferred onto the label paper S); a transporting unit (fig. 12, roller mechanisms 86) which transports said image recording material whose shape has at least two sides being opposite (fig. 1, label paper S is rectangular so it has opposite sides) in a predetermined transporting direction (col. 4, lines 31-33, a plurality of guide plates 87 are disposed to hold the continuous printing paper P between the roller mechanisms 86 and the like, see fig. 12); an image recording position detecting unit (fig. 7, paper width sensor 16) which is arranged at positions at least two sides along (col. 10, lines 12-15, paper width sensor 16 employs an array of lens as it as it image sensor) a predetermined transporting

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direction (col. 10, lines 12-15, the paper width sensor 16 is to detect the position of the printing paper P in the width direction of the paper, see fig. 7), and which detects an image size based on positions of said at least two sides along said predetermined transporting direction; an image recording position correcting unit (fig. 6, control function 66) which corrects said image recording position for said image recording material based on result of detection by said image recording position detecting unit (col. 10, lines 58-61, a data table of the angle of correction with respect to the positional deviation is stored in the control function portion 66); and an image forming unit which forms a predesired image on said image recording material at the corrected image recording position (col. 10, lines 1-6, the skew correction mechanism U3 is disposed in the traveling path N of the printing paper P to control (correct) continuously the position in the width direction of the printing paper P to a normal position with respect to the peripheral surface of the photosensitive drum 2).

Regarding claim 9, Kahoyashi discloses an image recording apparatus according to claim 8, said position detecting unit having a laser length measuring unit (col. 10, line 15, paper width sensor 16 utilize an image sensor employing a lens array-- examiner is interpreting lens array as being a laser length measuring unit since in a laser device an array of lens is used to amplify a white light source to make it a collimated light, see fig. 7).

Regarding claim 10, Kahoyashi discloses an image recording apparatus according to claim 8, said position detecting unit having a transmission-type detecting

unit or a reflection-type optical detecting unit (col. 10, line 15, paper width sensor 16 utilize an image sensor employing a lens array, see fig. 7).

Regarding claim 12, Kahoyashi discloses an image recording apparatus according to claim 8, said image recording material being a rectangular (fig. 5, label paper S is shown being rectangular in shape) and/or flexible film.

Regarding claim 13, Kahoyashi discloses an image recording apparatus according to claim 8 being a thermal printer or a laser printer (col. 5, lines 1-5 A main charger 3 is provided for charging the photosensitive drum 2, a printing head 4 prints information such as figures and characters on the photosensitive drum 2 and a developer 5 attaches toner to the printing information on the photosensitive drum 2. All of these elements are successively disposed opposite to the surface of the photosensitive drum 2 before the transfer--it is known in the art that this is the process of a laser printer).

Regarding claim 14, Kahoyashi discloses an image recording apparatus (fig. 12, is a front view schematically illustrating a label printer) comprising: an image recording unit (fig. 12, printing head 4) which records an image on an image recording material (col. 6, lines 60-61, the printing head 4 is started so that printing information is transferred onto the label paper S); a transporting unit (fig. 12, roller mechanisms 86) which transports said image recording material whose shape is rectangular (fig. 1, label paper S is rectangular so it has opposite sides) in a predetermined transporting direction (col. 4, lines 31-33, a plurality of guide plates 87 are disposed to hold the continuous printing paper P between the roller mechanisms 86 and the like, see fig. 12);

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an image recording position detecting unit (fig. 7, paper width sensor 16) which detects an inclination of said image recording material based on positions of said at least two sides along (col. 10, lines 12-15, paper width sensor 16 employs an array of lens as it as it image sensor) said predetermined transporting direction (col. 10, lines 12-15, the paper width sensor 16 is to detect the position of the printing paper P in the width direction of the paper, see fig. 7); an image recording position correcting unit (fig. 6, control function 66) which corrects said image recording position for said image recording material based on result of detection by said image recording position detecting unit unit (col. 10, lines 58-61, a data table of the angle of correction with respect to the positional deviation is stored in the control function portion 66); and an image forming unit which forms a predesired image on said image recording material at the corrected image recording position (col. 10, lines 1-6, the skew correction mechanism U3 is disposed in the traveling path N of the printing paper P to control (correct) continuously the position in the width direction of the printing paper P to a normal position with respect to the peripheral surface of the photosensitive drum 2).

Regarding claim 15, Kahoyashi discloses an image recording apparatus according to claim 14, said position detecting unit having a laser length measuring unit (col. 10, line 15, paper width sensor 16 utilize an image sensor employing a lens array-- examiner is interpreting lens array as being a laser length measuring unit since in a laser device an array of lens is used to amplify a white light source to make it a collimated light, see fig. 7).

Regarding claim 16, Kahoyashi discloses an image recording apparatus according to claim 14, said position detecting unit having a transmission-type detecting unit or a reflection-type optical detecting unit (col. 10, line 15, paper width sensor 16 utilize an image sensor employing a lens array, see fig. 7).

Regarding claim 18, Kahoyashi discloses an image recording apparatus according to claim 14, said image recording material being a flexible film (fig. 1, label paper S, it is known in the art that the label paper can be made up of plastic film such as polyester film which is flexible).

Regarding claim 19, Kahoyashi discloses an image recording apparatus according to claim 14 being a thermal printer or a laser printer (col. 5, lines 1-5 A main charger 3 is provided for charging the photosensitive drum 2, a printing head 4 prints information such as figures and characters on the photosensitive drum 2 and a developer 5 attaches toner to the printing information on the photosensitive drum 2. All of these elements are successively disposed opposite to the surface of the photosensitive drum 2 before the transfer--it is known in the art that this is the process of a laser printer).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 11, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kahoyashi in view of Taniguchi et al (U.S. Patent 6,385,944) hereinafter Taniguchi.

Regarding claim 5, Kahoyashi discloses an image recording apparatus according to claim 1, for detecting and correcting the skew angle of the image recording material in an image forming apparatus (see fig. 7).

Kahoyashi does not disclose expressly that the position detecting unit having a potentiometer provided with a lever capable of rotating around a shaft.

Taniguchi discloses a potentiometer with a lever for a printer. The potentiometer monitors the position that is, the width of the paper roll unit (col. 5, lines 35-60).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kahoyashi as per teaching of Taniguchi because of the following reason: by using a potentiometer with a lever to detect changes to the position of an image recording material; a less costly position measuring device that is easier to implement in the image recording is achieved. This is more cost effective than using an optical sensor and light source combination which has more circuitry and is more expensive.

Regarding claim 11, Kahoyashi discloses an image recording apparatus according to claim 1, for detecting and correcting the skew angle of the image recording material in an image forming apparatus (see fig. 7).

Kahoyashi does not disclose expressly that the position detecting unit having a potentiometer provided with a lever capable of rotating around a shaft.

Taniguchi discloses a potentiometer with a lever for a printer. The potentiometer monitors the position that is, the width of the paper roll unit (col. 5, lines 35-60).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kahoyashi as per teaching of Taniguchi because of the following reason: by using a potentiometer with a lever to detect changes to the position of an image recording material; a less costly position measuring device that is easier to implement in the image recording is achieved. This is more cost effective than using an optical sensor and light source combination which has more circuitry and is more expensive.

Regarding claim 17, Kahoyashi discloses an image recording apparatus according to claim 1, for detecting and correcting the skew angle of the image recording material in an image forming apparatus (see fig. 7).

Kahoyashi does not disclose expressly that the position detecting unit having a potentiometer provided with a lever capable of rotating around a shaft.

Taniguchi discloses a potentiometer with a lever for a printer. The potentiometer monitors the position that is, the width of the paper roll unit (col. 5, lines 35-60).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kahoyashi as per teaching of Taniguchi because of the following reason: by using a potentiometer with a lever to detect changes to the position of an image recording material; a less costly position measuring device that is easier to implement in the image recording is achieved. This is more cost effective than using an

optical sensor and light source combination which has more circuitry and is more expensive.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew H. Lam whose telephone number is (571) 272-8569. The examiner can normally be reached on M-F (9:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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